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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/236,373	01/25/1999	BRUCE A. BUHLER	71-673-1	1565
<div>7590 10/03/2007</div> <div>STEVEN W WEINRIEB SCHWARTZ 7 WEINRIEB 2001 JEFFERSON DAVIS HWY CRYSTAL PLAZA ONE SUITE 1109 ARLINGTON, VA 22202</div>				
			EXAMINER	
			PRICE, CARL D	
			ART UNIT	PAPER NUMBER
			3749	
			MAIL DATE	DELIVERY MODE
			10/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/236,373

Applicant(s)

BUHLER, BRUCE A.

Examiner

CARL D. PRICE

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The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. (See 37 CFR 1.704(b).)

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Reissue Application

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/24/2007 has been entered.

Continuing Obligation under 37 CFR 1.56

Applicant is reminded of the continuing obligation under 37 CFR 1.56 to timely apprise the Office of any litigation information, or other prior or concurrent proceeding, involving Patent No. 5,755,568, which is material to patentability of the claims under consideration in this reissue application. This obligation rests with each individual associated with the filing and prosecution of this application for reissue. See MPEP §§ 1404, 1442.01 and 1442.04.

Response to Arguments

Applicant's arguments with respect to claims 1-3 and 5-26 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended the claims to be of a scope not previously considered. Applicant present arguments that the prior art relied on in the previous office action fail to show, disclose and/or teach certain aspects of applicant's invention now recited in the claims. More specifically, applicants argue that "... the tip head comprises three flame which together define a substantially completely circumferential flame array for substantially completely heating the entire circumferential extent of the member as clearly shown in the left side of Figure 2 of the present drawings. More particularly, or stated in other words, what the presently claimed invention has been capable of achieving is the heating the entire circumferential extent of the member to be treated with only, three orifices."

In response to applicant's remarks and in response to the amendments made to the claims which more specifically state that the tip heat includes first, second and third flame outlet

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orifices, that is three flame orifices US004671833 (Bradford), Wetzler (US001734316), Japanese '713 (JP 55-48713), Barnes et al (US002608031) or Yoshinori Ito (US003618197) are each now relied on to provide support for the examiner's conclusion that it would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to rely on only three flame ports for heating the entire circumferential extent of an article in the manner set forth in applicant's claims.

For the reasons set forth herein above and for the reasons set forth in the rejection of in the examiner's rejection of the claims based on prior art set forth below claims 1-3 and 5-26 are not though to be patentable.

Amendments to claims in a Reissue Application

An amendment paper must include the entire text of each claim being changed by such amendment paper and of each claim being added by such amendment paper. For any claim changed by the amendment paper, a parenthetical expression "amended," "twice amended," *etc.*, should follow the claim number. Each changed patent claim and each added claim must include markings pursuant to paragraph (d) of this section, except that a patent claim or added claim should be canceled by a statement canceling the claim without presentation of the text of the claim.

All amendment changes must be made relative to the patent to be reissued. Pursuant to 37 CFR 1.173(d), any such changes which are made to the specification, including the claims, must be shown by employing the following "markings:"

(A) The matter to be omitted by reissue must be enclosed in brackets; and

(B) The matter to be added by reissue must be underlined, except for amendments submitted on compact discs (pursuant to 37 CFR 1.96 for computer printouts or programs, and 37 CFR 1.825 for sequence listings). Matter added by reissue on compact discs must be preceded with "U>" and end with "<U>" to properly identify the material being added.

Response to Amendment

The amendment filed 09/24/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: There is no support in the original disclosure for the manner in which the various elements of the newly submitted drawing figure 2 are illustrated.

Applicant is required to cancel the new matter in the reply to this Office Action.

Drawings

§ 1.83 Content of drawing.

(a) The drawing in a nonprovisional application **must show every feature of the invention specified in the claims.** However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a labeled rectangular box).

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ports being angularly oriented to generate flames extending from first to a second plane, etc. and the flames projecting outwardly with respect to the first plane to achieve heating along the second plane (see, for example, the last paragraph of claim 1 (amended)) must be shown or the feature(s) canceled from the claim(s). These structural details are essential for a proper understanding of the disclosed invention since applicant has amended the claims to include these limitations in an attempt to distinguish the claimed invention over the prior art of record. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

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matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Japanese '310** (of record) (figures 1 and 2) or **Japanese '570** (of record) in view of **Wiener** (figures 2, 4 and 5), **Lynch et al** (of record) or **Nis et al** and **Falk et al** (of record), and in view of **US004671833** (Bradford), **Wetzler** (US001734316), **Japanese '713** (JP 55-48713), **Barnes et al** (US002608031) or **Yoshinori Ito** (US003618197).

Japanese '310 and **Japanese '570** disclose the invention substantially as set forth in the claims with possible exception to:

- the curve of the torch head extending through between 240 and 280 degrees;
- the torch head having separate fuel gas and oxygen supply passages therein; and
- control means on the torch head and associated with each of the fuel gas and oxygen passages to selectively block the flow there through.

Japanese '310 and **Japanese '570** show and/or disclose torch heads and handles having separate fuel gas and oxygen supply passages therein and control means on the torch head and associated with each of the fuel gas and oxygen passages to selectively block the flow there through. **Japanese '310** includes a tip stem (4) communicating with a fuel/oxygen passage and connected to an arcuate shaped tip head (Figures 1,2) and having at least a first, second and third angularly spaced orifices (2) which open toward a common point. And, **Japanese '310** discloses and shows flames directed angularly from a first burner head plane to a second heater member intersecting plane (figure 2). **Japanese '570** shows at least a first, second and third angularly spaced orifices (2) which open toward a common point.

Wiener et al teaches (figure 5; column 3, line 69 - column 4, line 2 and column 4, lines 60-72), from applicant's the same torch head field of endeavor, selectively forming the semi-circular segment (52) of the burner head to accommodate, through an arcuate distance to defined a gap to facilitated the insertion of the member to be heated into the interior of the tip head through a side portion of the tip head.

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Lynch et al teaches (figures 8,9; column 6, lines 43-50), from applicant's the same torch head field of endeavor, alternative or selectively forming the semi-circular segment of the burner head to be greater than 180 degrees.

Nis et al teaches (see column 3, line 64 - column 4, line 5), from applicant's the same torch head field of endeavor, that:

FIG. 5 shows a side view of an exemplary nozzle plate 16. All of the interleaved grooves 32 and 36 in groups 29 and 29' are radially directed at common line 81 while the slots in groups 30, 30' and 31, 31' are radially directed at the common lines 82 and 83, respectively. Common line 82 is on the centerline of the tube 90 while common lines 81 and 82 are on the outer surface of the tube. Although each of the three groups are directed towards different common lines in the exemplary embodiment it may be advantageous to direct the grooves of several groups at the same common line when the number of groups or the size of the tube increases.

And,

The instant torch 10 is efficient and relatively inexpensive to fabricate. Additionally, the torch 10 may be repaired simply by replacing any of the three basic components (i.e., the outer members 12 and 14 and the nozzle plate 16). Furthermore, the heat zone and flame pressure areas provided by the instant torch 10 may be modified by simply changing the size of the grooves 32 and 36 and/or the thickness of the nozzle plate 16 as well as the number of groups of grooves.

And,

"Although the exemplary torch uses an oxygen-hydrogen mixture, other gas combinations such as methane, propane or the like can be used. Additionally, the exemplary embodiment depicts the use of three groups of grooves. However, the number of groups and their arcuate spacing may be adjusted to alter the width of the heat zone. The instant torch 10 having three arcuately spaced groups of grooves provided a heat zone having approximately one-half the length (i.e., 1.25" to 2.5") of hot zones generated by the torch shown in U.S. Pat. No. 4,401,267. "

And,

"It is to be understood that the embodiments described herein are merely illustrative of the principles of the invention. Various modifications may be made thereto by persons skilled in the art which will embody the principles of the invention and fall within the spirit and scope thereof. For instance, the torch 10 is arranged to provide an arcuate surface of approximately 180 degree., however the arc can be less than or greater than 180.degree. and may be 360 degrees forming an annulus through which a tube 90 may pass.

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Falk et al teaches, from the applicant's same torch head field of endeavor, forming a integral torch head and handle tube (11) to include separate fuel gas and oxygen supply passages (21,25) therein and control means (40,55) on the torch head and associated with each of the fuel gas and oxygen passages to selectively block or control the flow there through. **Falk et al** includes a tip stem (29) communicating with the fuel and oxygen passages and connected to a tip head (34) having a flame orifice.

US004671833 (Bradford) discloses nozzles 214 have a width of 2 inches, have a length of 5 inches and are eight in number, generally spaced around gas ring 208. Preferably eight flame nozzles 214 are used, but the number of flame nozzles 214 can readily be from three to ten or more, keeping in mind that uniformity of heating sleeve 220 and pipe 222 is what is sought. Preferably nozzles 214 are set at an angle of 40 to 60 degrees to the longitudinal axis of vertical casing 216. Nozzles 214 are set at such an angle to make sure that the end of casing 216 is heated to the desired temperature so as to quickly heat shrink heat-shrinkable sleeve 220 to a substantial amount as it is coming into casing 216.

Wetzler (US001734316) (of record) which shows an arcuate torch head (21), *only three* flame openings (23) equally spaced at an angle of at least 100 degrees (i.e. – approximately 140 degrees as measured from figure 3 in Wetzler), where two are immediately adjacent the terminal ends of the arcuate member (23), a fuel supply connection or opening (24 or 25) located between an intermediate located and terminal end located flame port (23), and wherein the flame openings are inclined to “issue flames uniformly on a mould 18 from *above and all sides*” (emphasis added) wherein the heated member is located in a plane other than that defined by the arcuate torch (21).

Japanese '713 (JP 55-48713) (of record) which shows an arcuate torch head (7), *only three* equally spaced flame ports (72), where two are immediately adjacent the terminal ends of the arcuate member, and fuel supply connection or opening located between an intermediate located and terminal end located flame port, arranged to produce a *substantially* complete circumferential flame array likely *substantially* completely heating the entire circumferential extent of the member.

Barnes et al (US002608031) (of record) which show an arcuate torch head (13) and *only three* equally spaced flame ports (23) arranged to produce a *complete* circumferential flame array

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for *completely* heating the entire circumferential extent of the member (18), even though the arcuate member extends only 180 degrees.

Yoshinori Ito (US003618197) (of record) which shows (figure 5) an arcuate torch head (figures 1A-1D13) having only two equally spaced inclined flame ports (94, 95) arranged to produce a substantially complete circumferential flame array for *completely* heating the entire circumferential extent of the member.

Eisler (US001819597) (of record) which shows discloses an arcuate torch head having *three* equally spaced flame ports (55) arranged to produce a substantially complete circumferential flame array likely *substantially* completely heating the entire circumferential extent of the member.

In regard to claims **1-3** and **5-26**, for the purpose of facilitating the insertion of the member to be heated into the interior of the tip head, it would have been obvious to a person having ordinary skill in the art to dimension the arcuate dimensions of **Japanese '310** and **Japanese '570** to accommodate passage of the member to be heated through a side portion of the tip head, in view of the teaching of **Wiener et al.**, or in view of the teaching of **Nis et al.**

And, for the purpose of forming an integral torch head and handle tube, it would have been obvious to one with ordinary skill in the art to modify the torch head and handle of **Japanese '310** and **Japanese '570**, to include a integral torch head and handle tube having separate fuel gas and oxygen supply passages therein and control means on the torch head/handle tube associated with each of the fuel gas and oxygen passages to selectively block or control the flow there through, in view of the teaching of **Falk et al.** In regard to **Japanese '570**, in particular, it would have been obvious to a person having ordinary skill in the art to modify the gas ports to be in the form of a single row of ports, in view of the teaching of **Japanese '310**.

Also, in regard to claims **1-3** and **5-26**, since the number, relative orientation, spacing, burner arc length, etc. would depend on numerous design concerns such as the size or circumference of an article to be heated, as taught by **Nis et al** or **Lynch et al**, the type of fuel burned, the amount of heat to be applied to the article heated, the flame size, the desired distribution of heat over the heated surface, etc., to space the orifices at an angle of 100 degrees, to form the tip to have an arcuate extent of 120 degrees, less than about 280 degrees, at least

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about 245 degrees, attach the stem at a point midway between a second and third orifice, etc. can be viewed as nothing more than mere matters of choice in design absent the showing of any new or unexpected results produced there from over the prior art of record. Furthermore, in view of the teachings of each one of US004671833 (Bradford), Wetzler (US001734316), Japanese '713 (JP 55-48713), Barnes et al (US002608031), Yoshinori Ito (US003618197), it would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to rely on only three flame ports for heating the entire circumferential extent of an article in the manner set forth in applicant's claims.

Also, the recitation "for heating a member attendant a metal bonding operation" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hiram*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). And, the claim limitation that heating is "within and along said second plane, attendant a metal bonding operation to be achieved along said second plane.", is a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

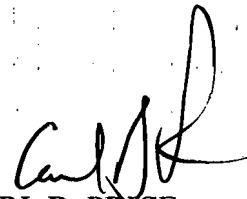
See the attached PTO FORM 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

USPTO CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven B. McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



CARL D. PRICE

Primary Examiner

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Cp



NEW SHEET

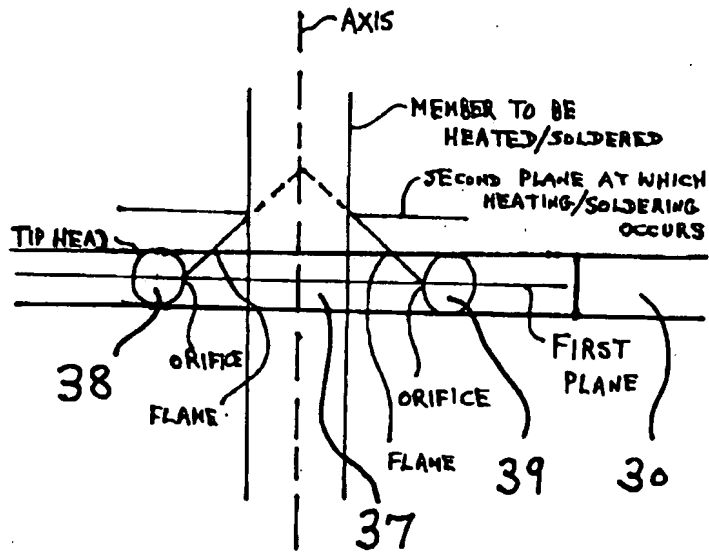


FIGURE 5

NOT
ACCEPTED
NOT
ACCEPTED
9/27/07